

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-46 are pending in the application, with 1, 17, 33, 36, 37, 40, 43, and 46 being the independent claims. Claims 1, 17, 33, 36, and 37 are amended. New claims 40-46 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Allowable Subject Matter

Applicant acknowledges with appreciation the Examiner's indication that claims 11-13, 27-29, and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Accordingly, Applicant has added new claims 40-46, which correspond to claims 11-13, 27-29, and 39 rewritten in independent form. Applicant respectfully requests that the Examiner provide an indication of the allowance of claims 40-46 in a subsequent communication.

Objections to the Drawings

In paragraph 2 of the Office Action, the drawings were objected to because in FIG. 2A, the memory block should be labeled 220, not 230. Accordingly, Applicant submits an attached drawing replacement sheet changing the label for the memory block

from 230 to 220. Thus, Applicant respectfully requests that the objection to the drawings be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 102

In paragraph 3 of the Office Action, claims 1-4, 6-10, 17-20, 23-26, 33-37, and 38 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,330,345 to Russo *et al.* (hereinafter Russo). Applicant respectfully traverses this rejection.

Technical differences exist between Russo and the claimed embodiments of the present invention. For example, Russo does not teach performing a fingerprint image darkness test, as recited in claim 1, as amended.

Russo states:

Calibration of the sensor device is automatically achieved by using two different techniques. During initialization of sensor device 320 (when no finger 310 is present on sensor device 320), processor 325 adjusts the settings of sensor device 320, as explained above, until a sensitivity level is determined that will yield a uniform, high-contrast image when a finger is placed on sensor device 320 (330-340).

(col. 5, lines 55-62). Thus, Russo states that during initialization (when no finger is present on sensor device 320), the settings of sensor device 320 are adjusted. Russo further states that the following parameters are adjusted:

In accordance with the present invention, a quality image is defined by two parameters, uniformity and contrast. . . . Uniformity across the image is achieved by determining the average intensity of a set of defined regions, such as columns or rows, and by computing the range or variance of intensities of each defined region.

(col. 6, lines 3-12). Thus, Russo states that the first parameter, uniformity, is achieved by determining the average intensity of a set of defined regions, and computing the range or variance of intensities of each defined region. Computing uniformity as described in Russo is not performing a fingerprint image darkness test, as recited in claim 1 of the present application. Russo further states for the second parameter, contrast:

Maximum contrast capability is achieved by adjusting the settings until the minimum intensity of the original range is translated to zero and the original range is expanded to occupy the full range.

(col. 6, lines 12-15). Thus Russo states that maximum contrast is achieved by adjusting settings so that the minimum intensity of the original range is translated to zero and the original range is expanded to occupy the full range. Achieving maximum contrast in Russo is not performing a fingerprint image darkness test, as recited in claim 1 of the present application.

Thus, Russo describes computing/achieving *uniformity* and *maximum contrast*, not performing a fingerprint image *darkness* test. Furthermore, computing/achieving uniformity and maximum contrast in Russo is done with regard to initialization of a sensor device, *when no finger is present on the sensor device*. This is different from claim 1, which recites performing a *fingerprint* image darkness test.

Nowhere does Russo teach or described performing a fingerprint image darkness test, as recited in claim 1. Russo further describes producing a high quality, resultant image, using diagnostic data to correct for dead pixels, regions, rows or columns by replacing them with average intensity values from their neighboring pixels or regions (col. 8, lines 36-43). As described in Russo (col. 5, lines 55-58; col. 6, lines 18-20), this diagnostic data is obtained when no finger is present on the sensor device. Russo also

describes subtracting non-uniform background noise from an image (col. 8, lines 43-47; col. 10, lines 1-6), and using weighted and intensity transformed combinations of regions from different images to form a resultant image (col. 8, lines 48-54, which states in part that "weightings are selected such that higher contrast regions of a particular image are chosen over lower contrast regions of other images . . ."). These statements of Russo are all different from claim 1, which recites performing a fingerprint image darkness test.

Thus, as described above, Russo does not teach performing a fingerprint image darkness test, as recited in claim 1. Therefore, claim 1 is patentable over Russo, for at these reasons. Furthermore, independent claims 17, 33, 36, and 37 are patentable over Russo for at least these reasons related to claim 1, and further in view of their own features. Claims 2-4, 6-10, 18-20, 23-26, 34, 35 and 38, which depend from independent claims 1, 17, 33, 36, and 37, also patentable over Russo for at least these reasons, and further in view of their of features. Accordingly, Applicant respectfully requests that this rejection of claims 1-4, 6-10, 17-20, 23-26, 33-37, and 38 be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 103

In paragraph 4 of the Office Action, claims 5 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Russo. Applicant respectfully traverses this rejection.

As described above, independent claims 1 and 17 are patentable over Russo. Thus, Applicant asserts that claims 5 and 21, which depend therefrom, are also patentable over Russo for at least the same reasons, and further in view of their own

features. Accordingly, Applicant respectfully requests that the rejection of these claims be reconsidered and withdrawn.

In paragraph 5 of the Office Action, claims 14-16, 22, and 30-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Russo as applied to claims 1-5, 6-10, 17-21, 23-26, 33-37, and 38 above, and further in view of U.S. Patent No. 6,241,288 to Bergenek *et al.* (hereinafter Bergenek). Applicant respectfully traverses this rejection.

As described above, independent claims 1 and 17 are patentable over Russo. Thus, Applicant asserts that claims 14-16, 22, and 30-32, which depend therefrom, are also patentable over Russo for at least the same reasons, and further in view of their own features. Furthermore, Applicant asserts that Bergenek does not provide the teachings missing from Russo. Accordingly, Applicant respectfully requests that the rejection of these claims be reconsidered and withdrawn.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "J. S. Weaver", with a large, stylized initial "J" and a long horizontal stroke extending to the right.

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Annotated Sheet Showing Changes

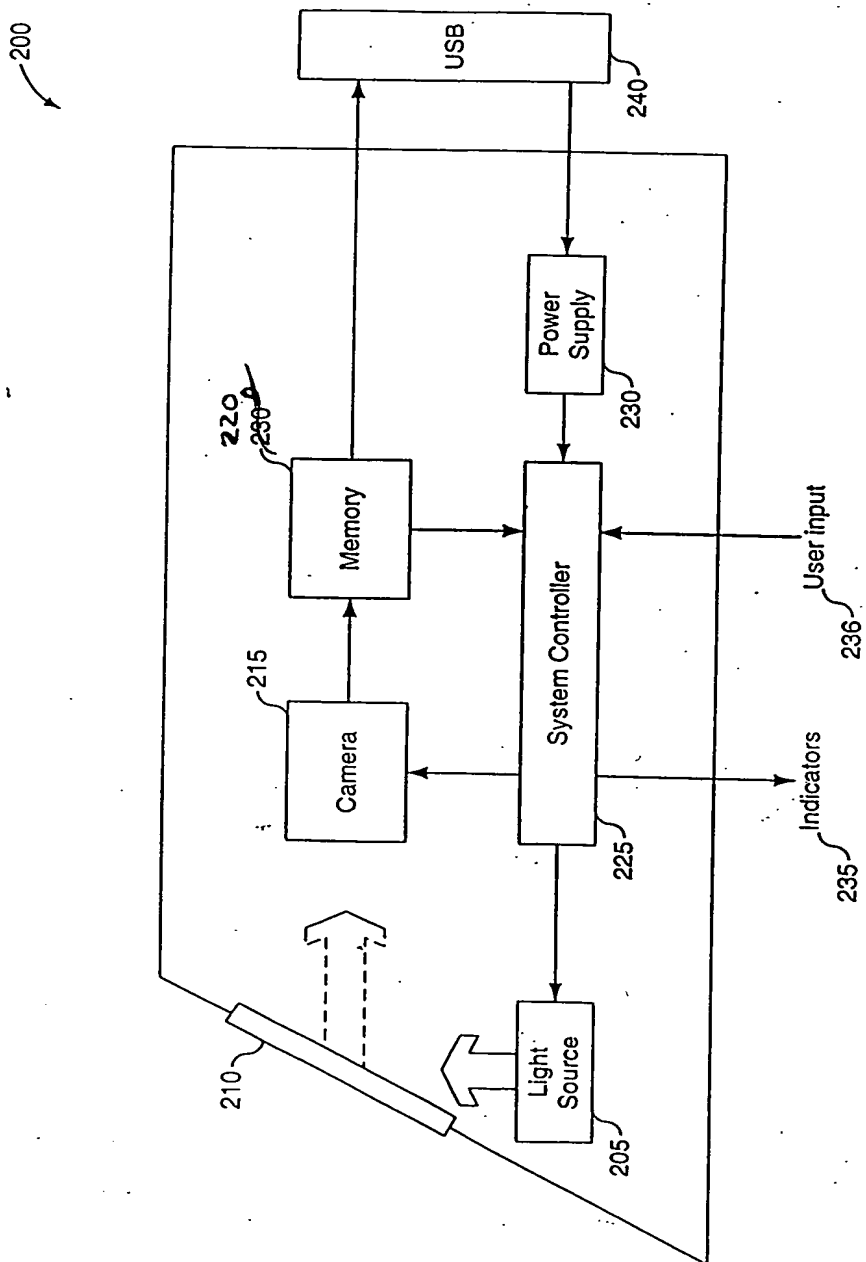


FIG. 2A